

that Swift, they were found to be identical, and Mr. Hume's ingenious surmise proved correct.

103. COLLOCALIA FUCIPHAGA.

The expanse of wings of one killed lately was $12\frac{1}{4}$. In the Andamans, where it is common, it has taken to building in houses, preferring the inner and darker rooms.

Tytler's *C. affinis* is considered to be *C. linchi*.

106. OTOTHRIX HODGSONI.

Mr. Blyth considers that *Otothrix* is simply the male of *Batrachostomus*. This view would reconcile the apparent differences of the drawings of *Podargus javanensis*, as given by Horsfield, and the same bird as figured by Shaw in its male or whiskered plumage. If this view is confirmed, *Otothrix hodgsoni* is probably the same as the bird alluded to by Mr. Blyth under *Batrachostomus affinis*, from Darjeeling, but *distinct* from that species.

114. LYNCORNIS CERVINICEPS, Gould.

Figured by Gould, Icon. Av. pt. ii. pl. 14.

The Giant Night-jar.

A fine specimen of this beautiful Night-jar was obtained by the Rev. W. Drawbridge at Darjeeling. The Lepcha Skikaree who procured it stated that he killed it in the warm valley of the Teesta. It had not previously been observed north of Awakan.

Length of specimen about 14 inches, wing 12, tail 8, bill at gape $1\frac{5}{8}$.

[To be continued.]

XXVIII.—*Remarks on the Avifauna of the Sandwich Islands.*

By P. L. SCLATER, M.A., Ph.D., F.R.S., &c.

SOME years ago I commenced to collect materials for an account of the terrestrial vertebrates of the Sandwich Islands, as far as they could be made out from existing authorities. My MS. has, however, remained unfinished, having been left in this state mainly in the hope that I might be able to induce a correspondent in these islands, to whom I had applied, to furnish me with some further information on the subject. But in this I have

not succeeded. Meanwhile Mr. Sanford B. Dole, of Honolulu, has published, in the 'Proceedings of the Boston Society of Natural History,' a "Synopsis of the Birds hitherto described from the Hawaiian Islands"* , and has thus saved me further labour on this subject. As, however, my views do not in every respect agree with those of Mr. Dole, and as, moreover, Mr. Dole's memoir appears to have escaped the usually observant eye of the ex-Editor of 'The Ibis,' I request leave to offer a few remarks on the Avifauna of the Sandwich Islands to the readers of this Journal, principally in illustration of Mr. Dole's article.

Mr. Dole appears to me to have executed his task of compilation in a very satisfactory manner, and to have embraced in his list all the species of birds that have been stated by naturalists to be met with in the Sandwich Islands. The total number of such species enumerated is 48, which, however, Mr. Dole considers to represent "little more than half the Avifauna of the group." By far the greater number of the birds of the Sandwich Islands, he observes, "are found in the mountain-region of the interior, and have thus escaped the naturalists of the various exploring expeditions, whose limited time has been spent on the sea-shore." It is much to be regretted that Mr. Dole (living, as he appears to do, at Honolulu) has not found leisure to explore these mountain-recesses, and to make additions to the list of species which have already been recorded by previous authorities. I trust, however, that he is preparing to do this, and that the present article is only intended as a basis upon which he may build for us a more complete account of the Hawaiian Avifauna.

The Accipitres enumerated by Mr. Dole embrace only three species—one of the diurnal and two of the nocturnal division. The small Osprey, *Pandion solitarius* of Cassin, has been considered by some authorities to be even generically distinct from the ordinary species. Others, however, have been inclined to believe that it would turn out to be only a small variety of the Common Osprey, one of the most universally distributed of known birds. Until more examples of it are

* Proc. Boston Soc. Nat. Hist. vol. xii. p. 294.

obtained (the single specimen hitherto known is in the collection of the Philadelphian Academy of Natural Sciences) I think we cannot venture to disagree with Mr. Cassin, who regards it as an excellent species, peculiar to the Hawaiian fauna. But the two Owls called by Mr. Dole *Strix delicatula* and *Brachyotus galapagoensis* are both widely distributed species. The latter is said by Mr. Cassin to be "certainly identical with the Chilian form" of this cosmopolitan bird, and, if such is the case, would in my opinion be specifically inseparable from *Otus brachyotus*, to which species I refer all the American Short-eared Owls that have come under my examination.

Strix delicatula is the ordinary Pacific form of *S. flammea* *.

We now come to the great land-order Insesores or Passeres, by examination of which the peculiarities of any Avifauna are usually best determined. Mr. Dole gives us a list of upwards of 20 supposed Hawaiian species of this order, and refers these to seven different families. Beginning with the "Meliphagidæ," he enumerates four species of *Moho*, or, as I should prefer to call it more classically, *Mohoa*. Three of them are undoubtedly good species of the genus, which is one of the most characteristic forms of the Hawaiian Avifauna—namely, *M. nobilis* (Merrem), *M. braccata* (Cassin), and *M. apicalis*, Gould. But I am very doubtful whether the *Entomyza angustipluma* of Cassin can be properly referred to this genus, and in my MS. have proposed for it the new generic term *Chætoptila* †. I have examined the typical specimen of this bird, which was in Mr. Cassin's hands when I was at Philadelphia in 1856.

Another peculiar Hawaiian type is the genus *Drepanis* with its curious hooked bill, which Mr. Dole refers to the "Promeropidæ," and of which he mentions four species. Of these, *D. coccinea*, *D. pacifica*, and *D. sanguinea* are undoubtedly good, but the last mentioned is perhaps generically separable under Cabanis's term *Himatione* ‡. The so-called *D. flava* is probably the female of *Himatione sanguinea*. Nearly allied to *Drepanis* is the still more extraordinary type *Hemignathus*, with

* Cf. Finsch. & Hartl. Orn. Central-Polyn. p. 11.

† χαίτη, *coma*; et πτελον, *pluma*.

‡ Mus. Hein. i. p. 99.

its upper mandible much longer than the lower. Of this there are likewise three known species—*H. olivaceus*, *H. obscurus*, and *H. lucidus*. As regards *Myzomela nigriventris*, which Mr. Dole places next, there can be little doubt that there has been some error in the introduction of this Feejeean and Samoan species into the Hawaiian Ornis.

Under the head Muscicapidæ, Mr. Dole mentions *Muscicapa maculata*, Gm., as “an uncertain species,” under which category I am content to leave it.

As “Turdidæ,” belonging to this Avifauna, Mr. Dole gives *Tatare otaitiensis* and *Turdus sandvicensis*. The first of these birds is a well-known type of the Central-Polynesian fauna, but, as I believe, quite foreign to that of the Sandwich Islands. The second belongs to the category of doubtful species, nothing being known of it since the days of Latham *.

“Ampelidæ,” as I consider them, are certainly not to be met with in the Sandwich Islands. Yet Mr. Dole gives two species of this family as occurring there (*Tenioptera obscura* and *Eopsaltria sandvicensis*), both being referred to genera utterly foreign to the fauna of this group. For the former of these, which is figured in Cassin’s edition of Peale’s work (pl. 9. fig. 3) I have already proposed the generic name *Phæornis* †. The latter, Dr. Cabanis has long ago shown to form a well-marked type of the Muscicapidæ, for which he proposed the name *Chasiempis* ‡. It is possible these two birds may belong to the same genus, in which case *Chasiempis* will be the first generic name for them; or they may even be specifically identical.

Of Corvidæ there appears to be undoubtedly one Hawaiian species—*Corvus hawaiiensis* of Peale. Whether this is the same as Gmelin’s *Corvus tropicus* is very doubtful §.

Of Finches (Fringillidæ) Mr. Dole mentions four species as occurring in the Sandwich Islands—*Hypoloxias coccinea*, *Psitti-*

* It is the “Sandwich Thrush” of Latham, from Sir Joseph Banks’s collection.

† Ibis, 1859, p. 327.

‡ Not *Chasiempis*, as written by Hartlaub, Gray, and Dole, but *Chasiempis* (ἐμπίς *musca*), as originally proposed by Cabanis in Wiegman. Arch. 1847, i. p. 207.

§ Cf. Cassin, Orn. U. S. Expl. Exp. p. 120.

rostra psittacea, *Emberiza sandvicensis*, and *E. atricapilla*. The two former of these are undoubtedly valid Hawaiian species, but in my opinion have nothing to do with the Fringillidæ, being merely aberrant forms of the same type as *Drepanis* and *Hemignathus*. The two latter are both North-American species, and have only been attributed to the "Sandwich Islands" from this locality having been confounded by Latham with "Sandwich Sound" on the north-western coast of Arctic America. An earlier generic term available for *Hypoloxias* (Bp. Consp. i. p. 518, 1850) is *Loxops* (Cabanis, Wieg. Arch. 1847, i. p. 330); and the bird should therefore be called *Loxops coccinea*.

According to my views, therefore, there are not more than 15 well-established species of Hawaiian Passeres, referable to 3 families, namely:—

- | | |
|-------------------------------------|-------------------------------------|
| I. MUSCIPIDÆ. | 8. <i>Drepanis pacifica</i> . |
| 1. <i>Chasiempis sandvicensis</i> . | 9. <i>Himatione sanguinea</i> . |
| 2. <i>Phæornis obscura</i> . | 10. <i>Hemignathus olivaceus</i> . |
| | 11. — <i>obscurus</i> . |
| II. MELIPHAGIDÆ. | 12. — <i>lucidus</i> . |
| 3. <i>Mohoa nobilis</i> . | 13. <i>Loxops coccinea</i> . |
| 4. — <i>braccata</i> . | 14. <i>Psittirostra psittacea</i> . |
| 5. — <i>apicalis</i> . | |
| 6. <i>Chatoptila angustipluma</i> . | III. CORVIDÆ. |
| 7. <i>Drepanis coccinea</i> . | 15. <i>Corvus hawaiiensis</i> . |

The whole of these genera are, so far as I know, restricted to the Sandwich Islands, except *Corvus*. All the species are, I believe, undoubtedly confined to the Hawaiian Archipelago.

Several Parrots have been attributed to the Sandwich Islands. Mr. Dole says "it is very doubtful" whether any really occur there. I am quite of Mr. Dole's opinion on this subject.

We now come to the Water-birds, or Grallæ, Herodiones, Anseres, and other allied groups. Mr. Dole has compiled the published records of the occurrences of these birds in the Sandwich Islands with much exactness and assiduity. Most of them are widely spread Polynesian species, such as *Ardea sacra*, *Actitis incana*, and *Anas superciliosa*, or such quasi-cosmopolitan rangers as *Charadrius plumialis* and *Streptilas interpres*.

There are, however, a few peculiar Sandwich-Island forms amongst them, such as the Hawaiian Coot (*Fulica alai*) and the Sandwich-Island Goose (*Bernicla sandvicensis*), which has been introduced into Europe, and breeds in our Zoological Gardens. The Water-birds, however, are of much less value in forming an estimate of the nature of any Avifauna than the Land-birds. I will therefore pass them by somewhat summarily, and proceed to draw the following conclusions upon the Hawaiian Ornis:—

1. The Avifauna of the Hawaiian group of islands, so far as it is hitherto explored, comprehends about 40 species, of which about 18 are Land-birds and 22 are Water-birds.

2. The Land-birds consist of 3 Accipitres and 15 Passeres. There are no *Pici*, *Cypseli*, *Coccyges*, or *Psittaci*.

3. The Accipitres comprehend 1 peculiar and 2 wide-ranging species. The supposed peculiar species, however, requires further investigation.

4. The Passeres consist of 15 well-established species, all peculiar, or “autochthones,” as such natives may be termed. These belong to eight or nine generic forms, of which one only occurs elsewhere.

5. Out of the 15 Passeres, 12 belong to the Meliphagidæ, and are mostly remarkable for the extraordinary forms of their bills. They may perhaps be ultimately found to constitute a special section of the Meliphagidæ, or even a distinct family of themselves, like the Helicterine Land-shells of the same archipelago*.

In conclusion, I may add that a more thorough investigation of the fauna of this remarkable group of islands is in every way desirable. It is to be hoped that Mr. Dole, who has bestowed so much pains upon the compilation of the list upon which my remarks have been founded is already engaged upon this task. It is especially desirable that the mode of distribution of the indigenous species amongst the different islands should be carefully attended to. The species and even the genera of the *Helicterinæ* are in many cases confined to one or more islands; and the same may be the case in the birds likewise.

One of the four British stations fixed upon for the observation

* See Mr. Harper Pease on this subject, P. Z. S. 1869, p. 644.

of the coming transit of Venus in 1874 is Oahu, one of the Sandwich-Islands group. In an article in 'Nature' I have already put forward the view * that this would be a specially favourable opportunity for a thorough examination of the whole fauna and flora of the Hawaiian Archipelago. I now beg leave to direct the attention of the readers of 'The Ibis' to my published remarks on this subject, and to request their advice and assistance in carrying out my plans.

XXIX.—*Letters, Extracts from Correspondence, Announcements, &c.*

WE have received the following letters addressed to "The Editor of 'The Ibis'":—

Copenhagen, 25th March, 1871.

SIR,—Allow me to make an observation respecting a statement in your excellent article "On the Psittacidæ of Central America," in the last number of 'The Ibis.' It is there remarked that the *Ara macao* (L.) has not been sent from Mexico by any naturalist since the days of Deppe and Schiede. It may therefore interest you to learn that my late friend, the well-known botanist and Mexican traveller, Dr. Liebmann, brought back in 1843 a specimen of that species, which is still in the Copenhagen Museum. The exact locality where he got the bird is unfortunately not recorded; but Liebmann visited only two of the provinces of Mexico, viz. Vera Cruz and Oajaca, and in some sketches on the physical conditions and the vegetation of the Pacific Coasts of Mexico, which he published long ago in a Danish periodical, I find the remark that "Macaws" are abundant in the forests in the vicinity of Guatulco, on the western slope of the great Cordillera. The bird in question may therefore very likely have been obtained in these forests; and your suggestion that, if *Ara macao* really occurs in Mexico at all, it is only to be found in the forest-country on the Pacific side of the Isthmus of Tehuantepec, seems so far quite justified.

Yours truly,

J. REINHARDT.

* 'Nature' for March 24, 1870.